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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/661,320	ISHIHARA, HIROSHI
	Examiner	Art Unit	
	James J. Debrow	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 June 2007</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-69</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-69</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to action: RCE filed 04 Jun. 2007.

2.   Claims 1-69 are pending in this case. Claims 1, 23, 46, and 58 are independent

claims.

Applicant's Response

3.   In Applicant's response dated 04 Jun. 2007, applicant amended independent

claims 1, 23, 46, 58 and dependent claims 47 and 58-69; cancelled claim 70; argued

against rejections previously set forth in previous Office Action.

Continued Examination Under 37 CFR 1.114

4.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 Jun.

2007 has been entered.

Information Disclosure Statement

5.   The information disclosure statement filed **12 Sep. 2003** fails to comply with 37

CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document;

each non-patent literature publication or that portion which caused it to be listed; and all

other information or that portion which caused it to be listed. It has been placed in the

application file, but the information referred to therein has not been considered.

Applicant failed to provide a legible English translation of document JP 2956390.

Applicant submits a computer printout of a copy of Japanese Parent No.

2956390 (including abstract) downloaded from the PAIR database file wrapper for this

application is attached hereto as "Exhibit A".

However Examiner finds "Exhibit A" to be a copy of Japanese Parent No. 06-

150012, which was twice submitted on 12 Sep. 2003.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 46-69 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 46-57:

The language of the claims raise a question as to whether the claims are directed merely to an abstract idea that would not result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Independent Claim 46 recites a method for making graphical drawing instructions valid and invalid. If an instruction is invalid, then that instruction is omitted and not processed. As currently cited, Claim 46 is directed to an abstract idea that does not produce a concrete, useful, and tangible result, in that the method merely *manipulates data*.

Stated differently, the method does nothing with the processed data that produces a concrete, useful and tangible result, such as a printed document.

Furthermore, Part (b) of the claim recites an "if" condition which makes the instruction invalid, however it does not recite a alternate process, for when the "if"

condition is not met, thus the method is merely a determining method which produces

not tangible result

Thus, the recited invention is computer software *per se.* A computer program is

merely a set of instructions capable of being executed by a computer. The computer

program itself is not a statutory process in that it does not include the computer-

readable medium needed to realize the functionality of the computer program. Thus, as

currently recited, Claim 46 is directed to an abstract idea that does not produce a

concrete, useful and tangible result.

Dependent Claims 47-57 merely recite further manipulation or specification of

data. Thus, none of Claims 47-57 produce a concrete, useful, and tangible result to form

the basis of statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   **Claims 1-14, 17-22, 46-52, 55-64 and 67-69 are rejected under 35 U.S.C.**

103(a) as being unpatentable over Kunimasa et al. (Patent No.: 6,456,298 B1;

Filed: Aug. 13, 1999) (hereinafter "Kunimasa"), in view of Kato (Pub. No.: US

2002/0132665 A1; Effective Filling Date: Mar. 19, 2001).

In regard to independent claim 1, Kunimasa discloses *an information*

processing apparatus comprising:

a drawing omission determination unit that determines whether drawing process

corresponding to a graphical drawing instruction, out of a plurality of graphical drawing

instructions, can be omitted based on a drawing attribute of a pattern corresponding to

the graphical drawing instruction (col. 5, lines 14-34; Kunimasa discloses the drawing

logical arithmetic process determination unit analyzes the drawing arithmetic process

instruction and determines whether the instruction or a plurality of continuous drawing

instructions has the content which may be processed without any logical arithmetic

process or not. The Examiner relates this teaching to the current invention that the

drawing instructions are analyzed to determine if they should be process further or not;

col. 10, lines 42-67 & col. 11, lines 1-30; Fig. 7; Kunimasa further discloses a process

in which drawing instructions are analyzed to determine if they are identical or not. An

second image pattern along with it's drawing instruction is compared to a first image

pattern along with it's drawing instruction, which is stored in drawing object memory

unit. If the drawing information is determined to be identical, the second drawing

information is not output and the process for the second drawing information is

completed at this point);

an output unit that outputs to an information processing apparatus the other

graphical drawing instructions to get an image corresponding to the other graphical

drawing instructions printed (col. 6, lines 20-35; 2 in Fig. 21; Kunimasa discloses the

interpreter unit which recognizes the drawing information received by the printer to

interpret a command by forming command and argument. Based on the instructions of

the interpreter unit, the imager unit draws the image.).

Kunimasa does not disclose expressly *a selection unit that makes the graphical*

drawing instruction invalid if the drawing omission determination unit determines that the

drawing process can be omitted, and makes other graphical drawing instructions valid.

wherein the graphical drawing instruction is made invalid, the drawing process

corresponding to the graphical drawing instruction is not performed.

However, Kato teaches *a selection unit that makes the graphical drawing*

instruction invalid if the drawing omission determination unit determines that the drawing

process can be omitted, and makes other graphical drawing instructions valid (0009,

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid.).

wherein the graphical drawing instruction is made invalid, the drawing process

corresponding to the graphical drawing instruction is not performed (0009, claim 14;

claim 28; Kato teaches a determination unit that decides whether or not to executes a

drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Thus wherein the

graphical drawing instruction is made invalid, the drawing process corresponding to the

graphical drawing instruction is not performed.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 2, Kunimasa discloses *the information processing*

apparatus according to claim 1, wherein the graphical drawing instruction is described

in a page description language that includes a basic graphical drawing instruction

which specifies a pattern to be drawn, and a drawing attribute instruction which

specifies the drawing attribute (col. 13, lines 49-63; Kunimasa discloses the drawing

instruction, including set attribute instructions, are presented in a page description

language (PDL).) .

In regard to dependent claim 3, Kunimasa discloses *the information processing*

apparatus according to claim 1, wherein the drawing attribute includes information

about a color of a pattern concerning the graphical drawing instruction and a method

for performing the drawing process (col. 13, lines 49-67; col. 14, lines 4-9; col. 14, lines

22-36; Kunimasa discloses how the drawing instruction include attribute information

concerning the color pattern of the image.).

In regard to dependent claim 4, Kunimasa does not expressly disclose *the*

information processing apparatus according to claim 3, wherein the drawing omission

determination unit determines that the drawing process can be omitted when the

drawing attribute of a pattern concerning the graphical drawing instruction does not

change the contents of a memory at a drawing destination before and after the drawing

process regardless of the contents of the memory.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the drawing attribute of a

pattern concerning the graphical drawing instruction does not change the contents of a

memory at a drawing destination before and after the drawing process regardless of the

contents of the memory (0009, 0073; 0119; claim 14; claim 28; Kato teaches a

determination unit that decides whether or not to executes a drawing operation.

According to an instruction output from the controller, the determination unit renders a

drawing instruction valid or invalid. Kato further teaches setting the attributes of a

drawing area. It would have been obvious to one of ordinary skill in the art to modify

Kato teachings wherein the drawing determination unit determines that the drawing

process can be omitted when the drawing attribute of a pattern concerning the graphical

drawing instruction does not change the contents of a memory at a drawing destination

before and after the drawing process regardless of the contents of the memory.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 5, Kunimasa does not expressly disclose *the*

information processing apparatus according to claim 4, wherein the drawing omission

determination unit determines that the drawing process can be omitted when it is

determined from the drawing attribute of a pattern concerning the graphical drawing

instruction and a method for performing the drawing process that the contents of a

memory at a drawing destination are not changed before and after the drawing process

regardless of the contents of the memory.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when it is determined from the

drawing attribute of a pattern concerning the graphical drawing instruction and a method

for performing the drawing process that the contents of a memory at a drawing destination are not changed before and after the drawing process regardless of the contents of the memory (0009, 0073; 0119; claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Kato further teaches setting the attributes of a drawing area. It would have been obvious to one of ordinary skill in the art to modify Kato teachings wherein the drawing determination unit determines that the drawing process can be omitted when it is determined from the drawing attribute of a pattern concerning the graphical drawing instruction and a method for performing the drawing process that the contents of a memory at a drawing destination are not changed before and after the drawing process regardless of the contents of the memory.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 6, Kunimasa discloses *the information processing apparatus according to claim 5, wherein the method is a logical sum (OR) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical

arithmetic process to the bit map data between images, such as logical sum (OR).

Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not expressly disclose *the drawing omission determination unit*

determines that the drawing process can be omitted when the color density is the

lowest.

However, Kato teaches *the drawing determination unit determines that the*

drawing process can be omitted when the color density is the lowest (0009, 0073; 0119;

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Kato further teaches

setting the attributes of a drawing area. It would have been obvious to one of ordinary

skill in the art to modify Kato teachings wherein the drawing determination unit

determines that the drawing process can be omitted when the color density is the

lowest.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 7, Kunimasa does not expressly disclose *the*

information processing apparatus according to claim 1, wherein the drawing omission

determination unit determines that the drawing process can be omitted when a memory

at a drawing destination is in an initialized state.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when a memory at a drawing

destination is in an initialized state (0009, claim 14; claim 28; Kato teaches a

determination unit that decides whether or not to executes a drawing operation.

According to an instruction output from the controller, the determination unit renders a

drawing instruction valid or invalid. It would have been obvious to one of ordinary skill in

the art to modify Kato teachings wherein the drawing omission determination unit

determines that the drawing process can be omitted when a memory at a drawing

destination is in an initialized state.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 8, Kunimasa does not disclose expressly *the*

information processing apparatus according to claim 1, further comprising an output

status flag that indicates whether the selection unit has already set a certain graphical

drawing instruction valid, wherein the drawing omission determination unit determines

whether the drawing process can be omitted based on the state of the output status

flag.

However, Kato teaches *an output status flag that indicates whether the selection unit has already set a certain graphical drawing instruction valid, wherein the drawing omission determination unit determines whether the drawing process can be omitted based on the state of the output status flag* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to an output status flag that indicates whether the selection unit has already set a certain graphical drawing. instruction valid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 9, Kunimasa discloses *the drawing attribute of a pattern concerning the graphical drawing instruction does not change the contents of a memory at a drawing destination before and after the drawing process when the memory is in an initialized state even when the drawing process is carried out* (col. 10, lines 42-67 & col. 11, lines 1-30; Fig. 7; Kunimasa discloses a process in which drawing instructions are analyzed to determine if they are identical or not. An second image pattern along with it's drawing instruction is compared to a first image pattern

along with it's drawing instruction, which is stored in drawing object memory unit. If the

drawing information is determined to be identical, the second drawing information is not

output and the process for the second drawing information is completed at this point.).

Kunimasa does not disclose expressly *the information processing apparatus*

according to claim 8, wherein the drawing omission determination unit determines that

the drawing process can be omitted when the output status flag indicates that the

graphical drawing instruction is not yet set valid.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to the output

status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 10, Kunimasa discloses *the information processing apparatus according to claim 8, when the color density is the lowest and also when a method for performing the drawing process is a replacement (SET) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 15, lines 56-65; col. 18, lines 3-11; Kunimasa discloses over-writing *(replacement (SET))* the image when the color value is zero *(color density is the lowest)*. Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly *the information processing apparatus according to claim 8, wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid.*

However, Kato teaches *wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to the output status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 11, Kunimasa discloses *the information processing apparatus according to claim 8, a method for performing the drawing process is a logical sum (OR) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical arithmetic process to the bit map data between images, such as logical sum (OR). Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly *the information processing apparatus according to claim 8, wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid, when the color density is the lowest.*

However, Kato teaches *wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid, when the color density is the lowest* (0009, claim 14; claim 28; Kato teaches a determination unit that

decides whether or not to executes a drawing operation. According to an instruction

output from the controller, the determination unit renders a drawing instruction valid or

invalid. Using the broadest interpretation, the Examiner concludes the output from the

controller to include but not limited to the output status flag indicates that the graphical

drawing instruction is not yet set valid, when the color density is the lowest.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 12, Kunimasa discloses *the information*

processing apparatus according to claim 8, a method for performing the drawing

process is an exclusive logical sum (XOR) among the drawing attributes of a pattern

concerning the graphical drawing instruction (col. 7, lines 37-45; col. 13, lines 4-6;

Kunimasa discloses a user can designate the logical arithmetic process to the bit map

data between images, such as exclusive logical sum (XOR). Kinimasa further discloses

the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly *the information processing apparatus*

according to claim 8, wherein the drawing omission determination unit determines that

the drawing process can be omitted when the output status flag indicates that the

graphical drawing instruction is not yet set valid, when the color density is the lowest

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid, when the color

density is the lowest (0009, claim 14; claim 28; Kato teaches a determination unit that

decides whether or not to executes a drawing operation. According to an instruction

output from the controller, the determination unit renders a drawing instruction valid or

invalid. Using the broadest interpretation, the Examiner concludes the output from the

controller to include but not limited to the output status flag indicates that the graphical

drawing instruction is not yet set valid, when the color density is the lowest.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 13, Kunimasa discloses *the information*

processing apparatus according to claim 8, a method of the drawing process is a

logical product (AND) among the drawing attributes of a pattern concerning the

graphical drawing instruction (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses

a user can designate the logical arithmetic process to the bit map data between

images, such as logical product (AND). Kinimasa further discloses the color value

(density) of an image can be zero.).

Kunimasa does not disclose expressly *the information processing apparatus*

according to claim 8, wherein the drawing omission determination unit determines that

the drawing process can be omitted when the output status flag indicates that the

graphical drawing instruction is not yet set valid.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to the output

status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 14, Kunimasa does not disclose expressly *the*

information processing apparatus according to claim 8, wherein the output status flag

indicates whether the selection unit has already set a certain graphical drawing

instruction valid for each graphical drawing instruction concerning an image for one

page.

However, Kato teaches *wherein the output status flag indicates whether the*

selection unit has already set a certain graphical drawing instruction valid for each

graphical drawing instruction concerning an image for one page (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to an output

status flag that indicates whether the selection unit has already set a certain graphical

drawing instruction valid for each graphical drawing instruction concerning an image for

one page.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 17, Kunimasa does not expressly disclose *the*

information processing apparatus according to claim 1, wherein when the graphical

drawing instruction concerns a pattern of a color, the drawing omission determination

unit determines whether the drawing process can be omitted for each color plane of the color.

However, Kato teaches *when the graphical drawing instruction concerns a pattern of a color, the drawing omission determination unit determines whether the drawing process can be omitted for each color plane of the color* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to determines whether the drawing process can be omitted for each color plane of the color.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 18, Kunimasa does not expressly disclose *the information processing apparatus according to claim 1, wherein the drawing omission determination unit determines whether the drawing process can be omitted only when a pattern concerning the graphical drawing instruction is a graphic pattern.*

However, Kato teaches *wherein the drawing omission determination unit determines whether the drawing process can be omitted only when a pattern*

concerning the graphical drawing instruction is a graphic pattern (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to

determines whether the drawing process can be omitted only when a pattern

concerning the graphical drawing instruction is a graphic pattern.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 19, Kunimasa discloses the drawing logical

arithmetic process determination unit analyzes the drawing arithmetic process

instruction and determines whether the instruction or a plurality of continuous drawing

instructions has the content which may be processed without any logical arithmetic

process or not. The Examiner relates this teaching to the current invention that the

drawing instructions are analyzed to determine if they should be process further or not

(col. 5, lines 14-34);

Kunimasa does not disclose expressly *the information processing apparatus*

according to claim 1, wherein when a pattern concerning the graphical drawing

instruction is an image pattern, the drawing omission determination unit detects

continuous pixels of the same color within the image pattern, and determines whether the drawing process can be omitted for each portion of continuous pixels.

However, Kato teaches *wherein when a pattern concerning the graphical drawing instruction is an image pattern, the drawing omission determination unit detects continuous pixels of the same color within the image pattern, and determines whether the drawing process can be omitted for each portion of continuous pixels* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to determines whether the drawing process can be omitted when detecting continuous pixels of the same color within the image pattern.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 20, 57 and 69, Kunimasa does not disclose expressly *when a pattern concerning the graphical drawing instruction is an image pattern, the drawing omission determination unit determines whether the drawing process can be omitted of the image pattern in a word length unit.*

However, Kato teaches *when a pattern concerning the graphical drawing*

instruction is an image pattern, the drawing omission determination unit determines

whether the drawing process can be omitted of the image pattern in a word length unit

(0009; 0011; claim 14; claim 28; Kato teaches a determination unit that decides whether

or not to executes a drawing operation. According to an instruction output from the

controller, the determination unit renders a drawing instruction valid or invalid. At the

time of the invention, it would have been obvious to one of ordinary skill in the art to

modify Kato teachings wherein concerning the graphical drawing instruction is an image

pattern, the drawing determination unit determines whether the drawing process can be

omitted of the image pattern in a word length unit.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 21, Kunimasa discloses *the information*

processing apparatus according to claim 1, wherein the output unit outputs the other

graphical drawing instructions to the image formation apparatus one-by-one (col. 11,

line 59-64).

In regard to dependent claim 22, Kunimasa discloses *the information*

processing apparatus according to claim 1, further comprising a drawing data memory

that stores the other graphical drawing instructions, wherein the output unit outputs the

other graphical drawing instructions stored in the drawing data memory to the image

formation apparatus altogether (col. 4, line 30-40; col. 11, line 18-30; 2 & 3 in Fig. 1;

Kunimasa discloses how drawing instructions are stored in the drawing object memory

unit.).

In regard to independent claims 46 and 58, Kunimasa does not expressly

disclose *a machine-implemented drawing processing method comprising:*

determining whether drawing process corresponding to a plurality of graphical

drawing instructions can be omitted based on a drawing attribute of a pattern

corresponding to the graphical drawing instruction;

making the graphical drawing instruction invalid if it is determined at the

determining that the drawing process can be omitted, and making other graphical

drawing instructions valid, to reduce the number of operations performed by said image

formation apparatus.

However, Kato teaches *determining whether drawing process corresponding to a*

plurality of graphical drawing instructions can be omitted based on a drawing attribute of

a pattern corresponding to the graphical drawing instruction (0009, 0011; 0073; 0119;

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Kato further teaches

setting the attributes of a drawing area. It would have been obvious to one of ordinary

skill in the art to modify Kato teachings wherein the drawing determination unit

determines that the drawing instructions can be omitted based on a drawing attribute of

a pattern corresponding to the graphical drawing instruction).

making the graphical drawing instruction invalid if it is determined at the

determining that the drawing process can be omitted, and making other graphical

drawing instructions valid, to reduce the number of operations performed by said image

formation apparatus (0009; 0011;claim 14; claim 28; Kato teaches a determination unit

that decides whether or not to executes a drawing operation. According to an instruction

output from the controller, the determination unit renders a drawing instruction valid or

invalid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 47 and 59, Kunimasa discloses *the drawing*

processing, wherein the determining includes determining that the drawing process can

be omitted when the drawing attribute of a pattern concerning the graphical drawing

instruction does not change the contents of a memory at a drawing destination before

and after the drawing process regardless of the contents of the memory (col. 10, lines

42-67 & col. 11, lines 1-30; Fig. 7; Kunimasa discloses a process in which drawing

instructions are analyzed to determine if they are identical or not. An second image

pattern along with it's drawing instruction is compared to a first image pattern along

with it's drawing instruction, which is stored in drawing object memory unit. If the

drawing information is determined to be identical, the second drawing information is not

output and the process for the second drawing information is completed at this point.).

In regard to dependent claims 48 and 60, Kunimasa discloses *the drawing*

processing wherein a method for performing the drawing process that the contents of a

memory at a drawing destination are not changed before and after the drawing process

regardless of the contents of the memory (col. 10, lines 42-67 & col. 11, lines 1-30; Fig.

7; Kunimasa discloses a process in which drawing instructions are analyzed to

determine if they are identical or not. An second image pattern along with it's drawing

instruction is compared to a first image pattern along with it's drawing instruction, which

is stored in drawing object memory unit. If the drawing information is determined to be

identical, the second drawing information is not output and the process for the second

drawing information is completed at this point.).

Kunimasa does not expressly disclose *wherein the determining includes*

determining that the drawing process can be omitted when it is determined from the

drawing attribute of a pattern concerning the graphical drawing instruction.

However, Kato teaches *wherein the determining includes determining that the*

drawing process can be omitted when it is determined from the drawing attribute of a

pattern concerning the graphical drawing instruction (0009; 0011;claim 14; claim 28;

Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 49 and 61, Kunimasa discloses *the drawing*

processing method, wherein the determining includes determining that the drawing

process can be omitted when a memory at a drawing destination is in an initialized

state (col. 15, lines 1-38).

In regard to dependent claims 50 and 62, Kunimasa does not disclose

expressly *the drawing processing method wherein the determining includes*

determining whether the drawing process can be omitted based on a state of an output

status flag that is set when a certain graphical drawing instruction is made valid.

However, Kato teaches *an output status flag that indicates whether the selection*

unit has already set a certain graphical drawing instruction valid, wherein the drawing

omission determination unit determines whether the drawing process can be omitted

based on the state of the output status flag (0009; 0011; claim 14; claim 28; Kato

teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to an output

status flag that indicates whether the selection unit has already set a certain graphical

drawing instruction valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 51 and 63, Kunimasa discloses *the drawing*

processing method wherein the drawing attribute of a pattern concerning the graphical

drawing instruction does not change the contents of a memory at a drawing destination

before and after the drawing process when the memory is in an initialized state even

when the drawing process is carried out (col. 10, lines 42-67 & col. 11, lines 1-30; Fig.

7; Kunimasa discloses a process in which drawing instructions are analyzed to

determine if they are identical or not. An second image pattern along with it's drawing

instruction is compared to a first image pattern along with it's drawing instruction, which

is stored in drawing object memory unit. If the drawing information is determined to be

identical, the second drawing information is not output and the process for the second

drawing information is completed at this point.).

Kunimasa does not disclose expressly *the drawing processing method according to claim 51, wherein the determining includes determining that the drawing process can be omitted when the output status flag is not set.*

However, Kato teaches *wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid* (0009; 0011; claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to the output status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 52 and 64, Kunimasa does not disclose expressly *the drawing processing method, wherein the output status flag indicates whether a certain graphical drawing instruction has been made valid for each graphical drawing instruction concerning an image for one page.*

However, Kato teaches *wherein the output status flag indicates whether a certain graphical drawing instruction has been made valid for each graphical drawing instruction concerning an image for one page* (0009; 0011; claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to the output status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 55 and 67, Kunimasa does not expressly disclose *the drawing processing method, wherein the graphical drawing instruction concerns a pattern of a color, and the determining includes determining whether the drawing process can be omitted for each color plane of the color.*

However, Kato teaches *when the graphical drawing instruction concerns a pattern of a color, the drawing omission determination unit determines whether the drawing process can be omitted for each color plane of the color* (0009; 0011 claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Using the broadest

interpretation, the Examiner concludes the output from the controller to include but not

limited to determines whether the drawing process can be omitted for each color plane

of the color.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 56 and 68, Kunimasa does not expressly

disclose *the drawing processing method, wherein the graphical drawing instruction*

corresponds to an image pattern, and the determining includes detecting continuous

pixels of the same color within the image pattern, and determining whether the drawing

process can be omitted for each portion of continuous pixels.

However, Kato teaches *wherein when a pattern concerning the graphical drawing*

instruction is an image pattern, the drawing omission determination unit detects

continuous pixels of the same color within the image pattern, and determines whether

the drawing process can be omitted for each portion of continuous pixels (0009; 0011;

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Using the broadest

interpretation, the Examiner concludes the output from the controller to include but not

limited to determines whether the drawing process can be omitted only when a pattern concerning the graphical drawing instruction is a image pattern.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

9.   It is noted that any citations to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the reference should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See MPEP 2123.

**10.   Claims 15-16, 23-45, 53-54 and 65-66 are rejected under 35 U.S.C. 103(a) as
being unpatentable over Kunimasa in view of Kato, further in view of Nagao et al.
(Patent No.: 6,100,998; Date of Patent: Aug. 8, 2000) (hereinafter "Nagao").**

In regard to dependent claim 15, Kunimasa does not disclose expressly *the
information processing apparatus according to claim 8, wherein one page is divided
into specific number of determination regions, and the output status flag is provided for
each determination region, and the drawing omission determination unit determines
whether the drawing can be omitted based on the status of the output status flag for
each determination region to which a drawing region concerning the graphical drawing
instruction belongs.*

Kato teaches *the output status flag is provided for each determination region,
and the drawing omission determination unit determines whether the drawing can be
omitted based on the status of the output status flag for each determination region to
which a drawing region concerning the graphical drawing instruction belongs* (0009,
claim 14; claim 28; Kato teaches a determination unit that decides whether or not to
executes a drawing operation. According to an instruction output from the controller,
the determination unit renders a drawing instruction valid or invalid. Using the broadest
interpretation, the Examiner concludes the output from the controller to include but not

limited to a status of the output status flag for each determination region to which a

drawing region concerning the graphical drawing instruction belongs.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

Nagao teaches *the information processing apparatus according to claim 8,*

wherein one page is divided into specific number of determination regions (col. 5, lines

61-64; Nagao teaches a single page may be constituted by a plurality of regions.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa and Kato with Nagao for the benefit of not

executing unnecessary drawing instruction so that high speed and high quality drawing

process may be enabled (col. 3, lines 32-34).

In regard to dependent claim 16, Kunimasa in view of Kato does not disclose

expressly *the information processing apparatus according to claim 15, wherein the*

determination regions are decided based on bands.

However, Nagao teaches *the information processing apparatus according to claim 15, wherein the determination regions are decided based on bands* (col. 1, lines 53-54; col. 5, lines 61-64).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa and Kato with Nagao for the benefit of reducing massive memory requirements, thus lowering the cost of memory accordingly (col.1, lines 44-47).

In regard to independent claim 23, Kunimasa discloses *an image formation apparatus comprising:*

a page memory (col. 5, line 54; 24 in Fig 2.; Kunimasa discloses *an image forming* system which include a page memory);

a drawing unit that performs the drawing process to draws an image onto the page memory based on the other graphical drawing instructions (col. 6, lines 20-45; Kunimasa discloses an image unit that draws an image depending on the instructions of the interpreter unit. The images are then stored in a page memory.).

Kunimasa does not expressly disclose *a drawing omission determination unit that determines whether drawing process corresponding to a graphical drawing instruction, out of a plurality of graphical drawing instructions, can be omitted based on a drawing attribute of a pattern corresponding to the graphical drawing instruction;*

a selection unit that makes the graphical drawing instruction invalid if the drawing

omission determination unit determines that the drawing process can be omitted, and

makes other graphical drawing instructions valid;

an image formation unit that forms an image onto a recording medium paper

based on the image on the page memory.

wherein the graphical drawing instruction is made invalid, the drawing process

corresponding to the graphical drawing instruction is not performed.

Kato teaches *a drawing omission determination unit that determines whether*

drawing process corresponding to a graphical drawing instruction, out of a plurality of

graphical drawing instructions, can be omitted based on a drawing attribute of a pattern

corresponding to the graphical drawing instruction (0009; 0073; 0119; claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Kato further teaches setting the attributes

of a drawing area. It would have been obvious to one of ordinary skill in the art to modify

Kato teachings wherein the drawing determination unit determines that the drawing

instructions can be omitted based on a drawing attribute of a pattern corresponding to

the graphical drawing instruction).

a selection unit that makes the graphical drawing instruction invalid if the drawing

omission determination unit determines that the drawing process can be omitted, and

makes other graphical drawing instructions valid (0009, claim 14; claim 28; Kato

teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid.).

wherein the graphical drawing instruction is made invalid, the drawing process

corresponding to the graphical drawing instruction is not performed (0009, claim 14;

claim 28; Kato teaches a determination unit that decides whether or not to executes a

drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Thus wherein the

graphical drawing instruction is made invalid, the drawing process corresponding to the

graphical drawing instruction is not performed.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

Nagao teaches *an image formation unit that forms an image onto a recording*

medium paper based on the image on the page memory (col. 8, lines 9-16; Nagao

teaches the output unit receives print data and prints the received data onto *recording*

paper.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa and Kato with Nagao for the benefit of not

executing unnecessary drawing instruction so that high speed and high quality drawing

process may be enabled (col.3, lines 32-34).

In regard to dependent claim 24, Kunimasa discloses *the image formation*

apparatus according to claim 23, wherein the graphical drawing instruction is described

in a page description language that includes a basic graphical drawing instruction which

specifies a pattern to be drawn, and a drawing attribute instruction which specifies the

drawing attribute (col. 13, lines 49-60; Fig. 10; Kunimasa discloses the drawing

instruction are sent by the drawing instruction group called PDL *(page description*

language)).

In regard to dependent claim 25, Kunimasa discloses *the image formation*

apparatus according to claim 23, wherein the drawing attribute includes information

about a color of a pattern concerning the graphical drawing instruction and a method

for performing the drawing process (col. 13, lines 49-67 & col. 14, lines 1-52).

In regard to dependent claim 26, Kunimasa discloses *the image formation*

apparatus according to claim 25, wherein the drawing omission determination unit

determines that the drawing process can be omitted when the drawing attribute of a

pattern concerning the graphical drawing instruction does not change the contents of a

memory at a drawing destination before and after the drawing process regardless of

the contents of the memory (col. 10, lines 42-67 & col. 11, lines 1-30; Fig. 7; Kunimasa

discloses a process in which drawing instructions are analyzed to determine if they are

identical or not. An second image pattern along with it's drawing instruction is

compared to a first image pattern along with it's drawing instruction, which is stored in

drawing object memory unit. If the drawing information is determined to be identical,

the second drawing information is not output and the process for the second drawing

information is completed at this point.).

In regard to dependent claim 27, Kunimasa discloses *the image formation*

apparatus according to claim 26, a method for performing the drawing process that the

contents of a memory at a drawing destination are not changed before and after the

drawing process regardless of the contents of the memory (col. 10, lines 42-67 & col.

11, lines 1-30; Fig. 7; Kunimasa discloses a process in which drawing instructions are

analyzed to determine if they are identical or not. An second image pattern along with

it's drawing instruction is compared to a first image pattern along with it's drawing

instruction, which is stored in drawing object memory unit. If the drawing information is

determined to be identical, the second drawing information is not output and the

process for the second drawing information is completed at this point.).

Kunimasa does not expressly disclose *wherein the determining includes*

determining that the drawing process can be omitted when it is determined from the

drawing attribute of a pattern concerning the graphical drawing instruction.

However, Kato teaches *wherein the determining includes determining that the drawing process can be omitted when it is determined from the drawing attribute of a pattern concerning the graphical drawing instruction* (0009; 0011;claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 28, Kunimasa discloses *the image formation apparatus according to claim 27, wherein the method is a logical sum (OR) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical arithmetic process to the bit map data between images, such as logical sum (OR). Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not expressly disclose *the drawing omission determination unit determines that the drawing process can be omitted when the color density is the lowest.*

However, Kato teaches *the drawing determination unit determines that the*

drawing process can be omitted when the color density is the lowest (0009, 0073; 0119;

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller, the

determination unit renders a drawing instruction valid or invalid. Kato further teaches

setting the attributes of a drawing area. It would have been obvious to one of ordinary

skill in the art to modify Kato teachings wherein the drawing determination unit

determines that the drawing process can be omitted when the color density is the

lowest.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 29, Kunimasa does not expressly disclos *the*

image formation apparatus according to claim 23, wherein the drawing omission

determination unit determines that the drawing process can be omitted when a memory

at a drawing destination is in an initialized state.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when a memory at a drawing

destination is in an initialized state (0009, claim 14; claim 28; Kato teaches a

determination unit that decides whether or not to executes a drawing operation.

According to an instruction output from the controller, the determination unit renders a

drawing instruction valid or invalid. It would have been obvious to one of ordinary skill in

the art to modify Kato teachings wherein the drawing omission determination unit

determines that the drawing process can be omitted when a memory at a drawing

destination is in an initialized state.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 30, Kunimasa does not disclose expressly *the*

image formation apparatus according to claim 23, further comprising an output status

flag for each graphical drawing instruction, wherein the selection unit sets an output

status flag corresponding a certain graphical drawing instruction to set that graphical

drawing instruction valid, wherein the drawing omission determination unit determines

whether the drawing process can be omitted based on the state of the output status

flag.

However, Kato teaches *an output status flag that indicates whether the selection*

unit has already set a certain graphical drawing instruction valid, wherein the drawing

omission determination unit determines whether the drawing process can be omitted

based on the state of the output status flag (0009, claim 14; claim 28; Kato teaches a

determination unit that decides whether or not to executes a drawing operation.

According to an instruction output from the controller, the determination unit renders a

drawing instruction valid or invalid. Using the broadest interpretation, the Examiner

concludes the output from the controller to include but not limited to an output status

flag that indicates whether the selection unit has already set a certain graphical drawing

instruction valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 31, Kunimasa discloses *the image formation*

apparatus according to claim 30, wherein the drawing attribute of a pattern concerning

the graphical drawing instruction does not change the contents of a memory at a

drawing destination before and after the drawing process when the memory is in an

initialized state even when the drawing process is carried out (col. 10, lines 42-67 &

col. 11, lines 1-30; Fig. 7; Kunimasa discloses a process in which drawing instructions

are analyzed to determine if they are identical or not. An second image pattern along

with it's drawing instruction is compared to a first image pattern along with it's drawing

instruction, which is stored in drawing object memory unit. If the drawing information is

determined to be identical, the second drawing information is not output and the

process for the second drawing information is completed at this point.).

Kunimasa does not disclose expressly *the image formation apparatus according*

to claim 30, wherein the drawing omission determination unit determines that the

drawing process can be omitted when the output status flag is not set.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to the output

status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 32, Kunimasa discloses *the image formation*

apparatus according to claim 30, when the color density is the lowest and also when a

method for performing the drawing process is a replacement (SET) among the drawing

attributes of a pattern concerning the graphical drawing instruction (col. 15, lines 56-65;

col. 18, lines 3-11; Kunimasa discloses over-writing *(replacement (SET))* the image

when the color value is zero *(color density is the lowest)*. Kinimasa further discloses

the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly *the information processing apparatus*

according to claim 8, wherein the drawing omission determination unit determines that

the drawing process can be omitted when the output status flag indicates that the

graphical drawing instruction is not yet set valid.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid (0009, claim 14; claim

28; Kato teaches a determination unit that decides whether or not to executes a drawing

operation. According to an instruction output from the controller, the determination unit

renders a drawing instruction valid or invalid. Using the broadest interpretation, the

Examiner concludes the output from the controller to include but not limited to the output

status flag indicates that the graphical drawing instruction is not yet set valid.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 33, Kunimasa discloses *the image formation apparatus according to claim 30, when the color density is the lowest and also when a method for performing the drawing process is a logical sum (OR) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical arithmetic process to the bit map data between images, such as logical sum (OR). Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly *the image formation apparatus according to claim 30, wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag is not set, when the color density is the lowest.*

However, Kato teaches *wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag indicates that the graphical drawing instruction is not yet set valid, when the color density is the lowest* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to the output status flag indicates that the graphical drawing instruction is not yet set valid, when the color density is the lowest.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 34, Kunimasa discloses *the image formation*

apparatus according to claim 30, wherein the color density is the lowest, and when a

method for performing the drawing process is an exclusive logical sum (XOR) among

the drawing attributes of a pattern concerning the graphical drawing instruction (col. 7,

lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical

arithmetic process to the bit map data between images, such as exclusive logical sum

(XOR). Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly the *image formation apparatus according*

to claim 30, wherein the drawing omission determination unit determines that the

drawing process can be omitted when the output status flag is not set, when the color

density is the lowest.

However, Kato teaches *wherein the drawing omission determination unit*

determines that the drawing process can be omitted when the output status flag

indicates that the graphical drawing instruction is not yet set valid, when the color

density is the lowest (0009, claim 14; claim 28; Kato teaches a determination unit that

decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to the output status flag indicates that the graphical drawing instruction is not yet set valid, when the color density is the lowest.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 35, Kunimasa discloses *the image formation apparatus according to claim 30, wherein the modification method is a logical product (AND) among the drawing attributes of a pattern concerning the graphical drawing instruction* (col. 7, lines 37-45; col. 13, lines 4-6; Kunimasa discloses a user can designate the logical arithmetic process to the bit map data between images, such as logical product (AND). Kinimasa further discloses the color value *(density)* of an image can be zero.).

Kunimasa does not disclose expressly teaches the *apparatus according to claim 30, wherein the drawing omission determination unit determines that the drawing process can be omitted when the output status flag is not set.*

However, Kato teaches *wherein the drawing determination unit determines that the drawing process can be omitted when the output status flag is not set* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 36, Kunimasa does not disclose expressly *the image formation apparatus according to claim 30, wherein the output status flag indicates whether a certain graphical drawing instruction has been made valid for each graphical drawing instruction concerning an image for one page.*

However, Kato teaches *wherein the output status flag indicates whether the selection unit has already set a certain graphical drawing instruction valid for each graphical drawing instruction concerning an image for one page* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to an output status flag that indicates whether the selection unit has already set a certain graphical

drawing instruction valid for each graphical drawing instruction concerning an image for

one page.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claims 37, 53 and 65, Kunimasa does not disclose

expressly *the drawing processing method further comprising dividing one page into a*

desired number of determination regions, wherein the output status flag is provided in

each determination region, and

the determining includes determining whether the drawing can be omitted based

on the status of the output status flag for each determination region to which a drawing

region concerning the graphical drawing instruction belongs.

Kato teaches *the output status flag is provided for each determination region,*

and the drawing omission determination unit determines whether the drawing can be

omitted based on the status of the output status flag for each determination region to

which a drawing region concerning the graphical drawing instruction belongs (0009,

claim 14; claim 28; Kato teaches a determination unit that decides whether or not to

executes a drawing operation. According to an instruction output from the controller,

the determination unit renders a drawing instruction valid or invalid. Using the broadest

interpretation, the Examiner concludes the output from the controller to include but not

limited to a status of the output status flag for each determination region to which a

drawing region concerning the graphical drawing instruction belongs.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

Nagao teaches, *wherein one page is divided into specific number of*

determination regions (col. 5, lines 61-64; Nagao teaches a single page may be

constituted by a plurality of regions.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa and Kato with Nagao for the benefit of not

executing unnecessary drawing instruction so that high speed and high quality drawing

process may be enabled (col. 3, lines 32-34).

In regard to dependent claims 38, 54 and 66, Kunimasa does not disclose

expressly *the image formation apparatus according to claim 37, wherein the dividing*

unit divides the one page into the determination regions based on bands.

However, Nagao teaches *the image formation apparatus according to claim 37, wherein the dividing unit divides the one page into the determination regions based on bands* (col. 1, lines 53-54; col. 5, lines 61-64).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Nagao for the benefit of reducing massive memory requirements, thus lowering the cost of memory accordingly (col.1, lines 44-47).

In regard to dependent claim 39, Kunimasa does not expressly disclose *the image formation apparatus according to claim 23, wherein the graphical drawing instruction concerns a pattern of a color, and the drawing omission determination unit determines whether the drawing process can be omitted for each color plane of the color.*

However, Kato teaches *when the graphical drawing instruction concerns a pattern of a color, the drawing omission determination unit determines whether the drawing process can be omitted for each color plane of the color* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to determines whether the drawing process can be omitted for each color plane of the color.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 40, Kunimasa does not expressly disclose *the image formation apparatus according to claim 23, wherein the drawing omission determination unit determines whether the drawing process can be omitted when the graphical drawing instruction corresponds to a graphic pattern.*

However, Kato teaches *wherein the drawing omission determination unit determines whether the drawing process can be omitted only when a pattern concerning the graphical drawing instruction is a graphic pattern* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not limited to determines whether the drawing process can be omitted only when a pattern concerning the graphical drawing instruction is a graphic pattern.).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an image processing apparatus, which allows user to select a mode for executing a drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 41, Kunimasa discloses the drawing logical arithmetic process determination unit analyzes the drawing arithmetic process instruction and determines whether the instruction or a plurality of continuous drawing instructions has the content which may be processed without any logical arithmetic process or not. The Examiner relates this teaching to the current invention that the drawing instructions are analyzed to determine if they should be process further or not (col. 5, lines 14-34);

Kunimasa does not disclose expressly *the image formation apparatus according to claim 23, wherein when a pattern concerning the graphical drawing instruction is an image pattern, the drawing omission determination unit detects continuous pixels of the same color within the image pattern, and determines whether the drawing process can be omitted for each portion of continuous pixels.*

However, Kato teaches *wherein when a pattern concerning the graphical drawing instruction is an image pattern, the drawing omission determination unit detects continuous pixels of the same color within the image pattern, and determines whether the drawing process can be omitted for each portion of continuous pixels* (0009, claim 14; claim 28; Kato teaches a determination unit that decides whether or not to executes a drawing operation. According to an instruction output from the controller, the determination unit renders a drawing instruction valid or invalid. Using the broadest interpretation, the Examiner concludes the output from the controller to include but not

limited to determines whether the drawing process can be omitted when detecting

continuous pixels of the same color within the image pattern.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 42, Kunimasa does not disclose expressly *the*

image formation apparatus according to claim 23, wherein when a pattern concerning

the graphical drawing instruction is an image pattern, the drawing omission

determination unit determines whether the drawing process can be omitted of the

image pattern in a word length unit.

However, Kato teaches *when a pattern concerning the graphical drawing*

instruction is an image pattern, the drawing omission determination unit determines

whether the drawing process can be omitted of the image pattern in a word length unit

(0009; 0011; claim 14; claim 28; Kato teaches a determination unit that decides whether

or not to executes a drawing operation. According to an instruction output from the

controller, the determination unit renders a drawing instruction valid or invalid. At the

time of the invention, it would have been obvious to one of ordinary skill in the art to

modify Kato teachings wherein concerning the graphical drawing instruction is an image

pattern, the drawing determination unit determines whether the drawing process can be

omitted of the image pattern in a word length unit.).

Therefore, at the time of the invention it would have been obvious to a person of

ordinary skill in the art to combine Kunimasa with Kato for the benefit of providing an

image processing apparatus, which allows user to select a mode for executing a

drawing operation or a mode for not executing a drawing operation (0118).

In regard to dependent claim 43, Kunimasa discloses *the image formation*

apparatus according to claim 23, wherein the output unit outputs the other graphical

drawing instructions to the image formation apparatus one-by-one (col. 11, line 59-64).

In regard to dependent claim 44, Kunimasa discloses *the image formation*

apparatus according to claim 23, further comprising a drawing data memory that stores

the other graphical drawing instructions, wherein the output unit outputs the other

graphical drawing instructions stored in the drawing data memory to the image

formation apparatus altogether (col. 4, line 30-40; col. 11, line 18-30; 2 & 3 in Fig. 1;

Kunimasa discloses drawing instructions are store in the drawing object memory unit.).

In regard to dependent claim 45, Kunimasa discloses *the image formation*

apparatus according to claim 24, further comprising:

a receiving unit that receives the drawing instructions from an external source

(col.5, line 52; 18 in Fig 2.);

and an interpreter that converts the drawing instructions into the graphical

drawing instructions of a format which is suitable for the drawing process (col. 6, lines

20-35; 2 in Fig. 21; Kunimasa discloses the interpreter unit which recognizes the

drawing information received by the printer to interpret a command by forming

command and argument. Based on the instructions of the interpreter unit, the imager

unit draws the image).

11.   It is noted that any citations to specific, pages, columns, lines, or figures in the

prior art references and any interpretation of the reference should not be considered to

be limiting in any way. A reference is relevant for all it contains and may be relied upon

for all that it would have reasonably suggested to one having ordinary skill in the art.

See MPEP 2123.

Response to Arguments

12.   Applicant's arguments, see Remarks, filed 04 June 2007, have been fully

considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of

Kunimasa, Kato and Nagao.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Debrow whose telephone number is 571-272-5768. The examiner can normally be reached on 8:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EXAMINER
ART UNIT 2176

WILLIAM BASHORE
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